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# NASA TECHNICAL MEMORANDUM

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## APOLLO TELESCOPE MOUNT—A PARTIAL LISTING OF SCIENTIFIC PUBLICATIONS AND PRESENTATIONS SUPPLEMENT 2

Edited by John M. Reynolds and William C. Snoddy  
Space Sciences Laboratory

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16. ABSTRACT  This report supplements NASA TM X-73300 and NASA TM X-73393. These reports are compilations of bibliographies from the principal investigator groups of the Apollo Telescope Mount (Skylab solar observatory facility) that gathered data from May 28, 1973, to February 8, 1974. The analysis of these data is presently under way and is expected to continue for several years.  The publications listed in this report are divided into the following categories: (1) Journal Publications, (2) Journal Publications Submitted, (3) Other Publications, (4) Presentations—National and International Meetings, and (5) Other Presentations. An author index is included together with errata for the first report.			
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**1. JOURNAL PUBLICATIONS**

- 1.148 Partial Analysis of the Flare-Prominence of 30 April 1974. S. T. Wu, M. Dryer, P. S. McIntosh and E. Reichmann. Solar Physics 44, 1975, 117-133.
- 1.149 Ultraviolet Solar Identifications Based on Extended Absorption Series Observed in the Laboratory Spectrum of Si I. C. E. Moore, R. Tousey, G. D. Sandlin, C. M. Brown, M. L. Ginter and S. G. Tilford. Astrophysics and Space Sci. Vol. 38, 1975, 359.
- 1.150 White Light and Radio Studies of the Coronal Transient of 14-15 September 1973. I. Material Motions and Magnetic Field. G. A. Dulk, S. F. Smerd, R. MacQueen, J. T. Gosling, A. Magun, R. T. Stewart, K. V. Sheridan, R. D. Robinson and S. Jacques. Solar Physics 49, 1976, 369.
- 1.151 Observations of Spatial and Temporal Variations in X-Ray Bright Point Emergence Patterns. L. Golub, A. S. Krieger and G. S. Vaiana. Solar Physics 50, 1976, 311-327.
- 1.152 On Build-Up of Magnetic Energy in the Solar Atmosphere. Y. Nakagawa, R. S. Steinolfson and S. T. Wu. Solar Physics 47, 1976, 193-203.
- 1.153 Photographic Image Intensification by Autoradiography. B. S. Askins. Applied Optics 15, 1976, 2860-2865.
- 1.154 Interplanetary Disturbances in the Solar Wind Produced by Density, Temperature or Velocity Pulses at .08 A.U. S. T. Wu, M. Dryer and S. M. Han. Solar Physics 49, 1976, 187-204.
- 1.155 Expansion of a Coronal Arch into the Outer Corona. D. M. Rust and E. Hildner. Solar Physics 48, 1976, 381-387.
- 1.156 Introductory Talk for 16th General Assembly IAU 1976, Invited. Zdenek Svestka. Proc. of the Meeting "How Can Flares Be Understood." Ed. Z. Svestka. 16th Gen. Assem. IAU, Grenoble, France, 27 August 1976, Solar Physics 53, 221-222.
- 1.157 A Comparison of Positions and Sizes of Sources of Centimeter and X-Ray Bursts. M. R. Kundu, C. E. Alissandrakis and S. W. Kahler. Solar Physics 50, 1976, 429-436.

- 1.158 Low-Energy Particle Events Associated with Sector Boundaries. Z. Svestka, L. Fritzova-Svestkova, J. T. Nolte, H. W. Dodson-Prince and E. R. Hedeman. Solar Physics 50, 1976, 491-500.
- 1.159 The Quantitative Properties of Three Soft X-Ray Flare Kernels Observed with the AS&E X-Ray Telescope on Skylab. S. W. Kahler, R. D. Petrasso and S. R. Kane. Solar Physics 50, 1976, 179-196.
- 1.160 Association of X-Ray Arches with Chromospheric Neutral Lines. P. S. McIntosh, A. S. Krieger, J. T. Nolte and G. Vaiana. Solar Physics 49, 1976, 57-77.
- 1.161 The Spatial Structure of a Solar Flare in Soft X-rays and Centimetric Wavelengths. R. Pallavicini and G. S. Vaiana. Solar Physics 49, 1976, 297-313.
- 1.162 Aplanatic Grazing Incidence X-Ray Microscopes: Design and Performance. R. C. Chase. Applied Optics 15, 1976, 3094.
- 1.163 ATM Observations, X-Ray Results. G. S. Vaiana, A. S. Krieger, A. F. Timothy and M. Zombeck. Astrophysics and Space Sci. Vol. 39, 1976, 75-101.
- 1.164 Physical Properties of a Polar Coronal Hole from 2 to 5  $R_{\odot}$ . R. H. Munro and B. V. Jackson. Astrophys. J. 213, 1977, 874-886.
- 1.165 An Emerging Flux Model for the Solar Flare Phenomenon. J. Heyvaerts, E. R. Priest and D. M. Rust. Astrophys. J. 216, 1977, 123-137.
- 1.166 High Coronal Structure of High Velocity Solar Wind Stream Sources. J. T. Nolte, A. S. Krieger, E. C. Roelof and R. E. Gold. Solar Physics 51, 1977, 459-471.
- 1.167 Solar Sources of the Interplanetary Magnetic Field and Solar Wind. R. H. Levine, M. D. Altschuler and J. W. Harvey. J. Geophys. Res. 82, 1977, 1061.
- 1.168 Evolution of Photospheric Magnetic Field Patterns During Skylab. R. H. Levine. Solar Physics 54, 1977, 327.
- 1.169 Coronal Plasma Parameters in a Long Duration X-Ray Event Observed by Skylab. J. A. Vorpahl, E. Tandberg-Hanssen, J. Smith, Jr. Astrophys. J. 212, 1977, 550.

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OF POOR QUALITY

- 1.170 The 3s-3p and 3p-3d Lines of Mg II Observed Above the Solar Limb from Skylab. U. Feldman and G. A. Doschek. Astrophys. J. Lett. 212, 1977, L147.
- 1.171 A Pictorial Comparison of Interplanetary Magnetic Field Polarity, Solar Wind Speed and Geomagnetic Disturbance Index During the Sunspot Cycle. N. R. Sheeley, Jr., J. R. Asbridge, S. J. Bame and J. W. Harvey. Solar Physics 52, 1977, 485.
- 1.172 Computer Solutions for Studying Correlations Between Solar Magnetic Fields and Skylab X-Ray Observations. D. Teuber, E. Tandberg-Hanssen and M. Hagyard. Solar Physics 53, 1977, 97-110.
- 1.173 Physical Parameters of a Solar Flare as Derived from Skylab X-Ray Data. J. B. Smith, Jr., R. M. Wilson, and W. Henze, Jr. Astrophys. J. Lett. 216, 1977 L79-82.
- 1.174 Variation of Energy Throughput with Off-Axis Angle for the S-056 X-Ray Telescope. J. W. Foreman, Jr. and J. M. Cardone. Applied Optics 16, 1977, 806-808.
- 1.175 A Long-Lived Coronal Arch System Observed in X-Rays. J. P. McGuire, E. Tandberg-Hanssen, K. R. Krall, S. T. Wu, J. B. Smith and D. M. Speich. Solar Physics 52, 1977, 91-100.
- 1.176 Image Data Processing System for Solar Astronomy. R. M. Wilson, D. L. Teuber, J. R. Watkins and C. M. Cooper. Applied Optics 16, 1977, 944-949.
- 1.177 Prominence Mass Ejection and Its Effects on the Corona. J. B. Smith, Jr., D. M. Speich, R. M. Wilson, A. C. deLoach, R. B. Hoover, J. P. McGuire and S. T. Wu. Solar Physics 52, 1977, 379-391.
- 1.178 The Spiral Configuration of Sunspot Magnetic Fields. M. J. Hagyard, E. A. West and N. P. Cumings. Solar Physics 53, 1977, 3-13.
- 1.179 Solar XUV Emission Line Profiles of Si II and Si III and Their Center to Limb Variations. K. R. Nicolas, G. E. Brueckner, R. Tousey, D. A. Tripp, O. R. White and R. G. Athay. Solar Physics 55, 1977, 305.
- 1.180 Multiple Loop Activations and Continuous Energy Release in the Solar Flare of 1973 June 15. K. G. Widing and K. P. Dere. Solar Physics 55, 1977, 431.

- 1.181 Observations of the O<sub>2</sub> Column Density Between 120 km and 70 km and Absorption Cross Section in the Vicinity of the H-Lyman Alpha. D. K. Prinz and G. E. Brueckner. J. of Geophys. Res. Vol. 82, 1977, 1481.
- 1.182 The Extreme Ultraviolet Spectrograph ATM Experiment S082B. J. D. F. Bartoe, G. E. Brueckner, J. D. Purcell and R. Tousey. Applied Optics 16, 1977, 879.
- 1.183 Emission Measures and Structure of the Transition Region of a Sunspot from Emission Lines in the Far Ultraviolet. C. C. Cheng and O. K. Moe. Solar Physics 52, 1977, 137.
- 1.184 Exploring the Earth's Atmosphere by Photography from Skylab. D. M. Packer and I. G. Packer. Applied Optics 16, 1977, 983.
- 1.185 Extreme-Ultraviolet Observations of Coronal Holes: I. Locations, Sizes and Evolution of Coronal Holes June 1973-January 1974. J. D. Bohlin. Solar Physics 51, 1977, 377.
- 1.186 The Emission Spectrum of the Hydrogen Balmer Series Observed Above the Solar Limb from Skylab II. Active Regions. U. Feldman and G. A. Doschek. Astrophys. J. 212, 1977, 913.
- 1.187 The Solar XUV Grazing Incidence Spectrograph - S020. D. L. Garrett and R. Tousey. Applied Optics 16, 1977, 898.
- 1.188 The Apollo Telescope Mount of Skylab - An Overview. R. Tousey. Applied Optics 16, 1977, 825.
- 1.189 A Comment on the Acceleration of Charged Particles in the Presence of Micro-Turbulence as Related to Solar Flares. D. S. Spicer. Solar Physics 51, 1977, 431.
- 1.190 The Emission Spectrum of the Hydrogen Balmer Series Observed Above the Solar Limb from Skylab I. A Quiet-Sun and Polar Coronal Hole. F. D. Rosenberg, U. Feldman and G. A. Doschek. Astrophys. J. 212, 1977, 905.
- 1.191 NRL/ATM Extreme Ultraviolet Solar Image Television Monitor Flown on Skylab. W. R. Crockett, N. P. Patterson, J. D. Purcell, R. J. Schumacher and R. Tousey.
- 1.192 Thin Aluminum Filters for Use on the Apollo Telescope Mount Extreme Ultraviolet Spectrograph. R. J. Schumacher and W. R. Hunter. Applied Optics 16, 1977, 904.



ORIGINAL PAGE IS  
OF POOR QUALITY

- 1.193 Observations of a Kink Instability in a Solar Flare. C. C. Cheng. *Astrophys. J.* 213, 1977, 558.
- 1.194 Strong Convective and Shock Wave Behavior in Solar Flares. H. W. Bloomberg, J. Davis and J. P. Boris. *J. Quant. Spectrosc. Radiat. Transfer* Vol. 17, 1977, 711.
- 1.195 The Solar Spectrum in the Vicinity of the Si IV Lines at 1122 and 1128 Å. (Research Note) U. Feldman and G. A. Doschek. *Astronomy & Astrophys.* 61, 1977, 295.
- 1.196 Lines of H<sub>2</sub> in Extreme-Ultraviolet Solar Spectra. C. Jordan, G. E. Brueckner, J. D. F. Bartoe, G. D. Sandlin and M. E. VanHoosier. *Nature* Vol. 270, 1977, 326.
- 1.197 Electron Densities in Solar Flares from Line Ratios of Ca XVII. G. A. Doschek, U. Feldman and K. P. Dere. *Astronomy & Astrophys. Lett.* 60, 1977, L11.
- 1.198 An Improved Measurement of a Spectrogram of a 'Gap.' (Research Note) G. A. Chapman and N. R. Sheeley, Jr. *Solar Physics* 51, 1977, 61.
- 1.199 Evolution of the High-Temperature Plasma in the 15 June 1973 Flare. C. C. Cheng. *Solar Physics* 55, 1977, 413.
- 1.200 A Comparison of the He II 304 Å and He I 10830 Å Spectro-heliograms. J. W. Harvey and N. R. Sheeley, Jr. *Solar Physics* 54, 1977, 343.
- 1.201 Electrostatically Unstable Heat Flow During Solar Flares and Its Consequences. D. S. Spicer. *Solar Physics* 54, 1977, 379.
- 1.202 On the Problem of Density Diagnostics for the EUV Spectrum of the Solar Transition Zone. G. A. Doschek and U. Feldman. *Astronomy & Astrophys. Lett.* 58, 1977, L13.
- 1.203 Flare Heating by Energetic Non-Thermal Electrons. J. Davis, P. C. Kepple and D. J. Strickland. *J. Quant. Spectros. Radiat. Transfer* Vol. 17, 1977, 711.
- 1.204 The Presence of Si I Series in the Ultraviolet Solar Spectrum: 3000 Å - 1200 Å. C. E. Moore, C. M. Brown, G. D. Sandlin, S. G. Tilford and R. Tousey. *Astrophysical J. Suppl. Series* 33, 1977, 393.

- 1.205     A Search for a Turbulent Free Region in the Solar Transition Zone. U. Feldman and G. A. Doschek. *Astrophys. J. Lett.* 216, 1977, L119.
- 1.206     Electron Densities in Solar Flare and Active Region Plasmas from a Density Sensitive Line Ratio of Fe IX. U. Feldman, G. A. Doschek and K. G. Widing. *Astrophys. J.* 219, 1978, 304.
- 1.207     Chromospheric Limb Spectra from Skylab 2000 Å - 3200 Å. G. A. Doschek, U. Feldman and L. Cohen. *Astrophys. J. Supp.* 33, 1977, 101.
- 1.208     High Resolution Spectra of the Solar Mg II h and k Lines. G. A. Doschek and U. Feldman. *Astrophys. J. Supp.* 35, 1977, 471.
- 1.209     XUV Spectra of the 15 June 1973 Solar Flare Observed from Skylab II. Intersystem and Forbidden Transitions in Transition Zone and Coronal Ions. U. Feldman, G. A. Doschek and F. D. Rosenberg. *Astrophys. J.* 215, 1977, 652.
- 1.210     XUV Spectra of the 1973 June 15 Solar Flare Observed from Skylab I. Allowed Transition in Chromospheric and Transition Zone Ion. G. A. Doschek, U. Feldman and F. D. Rosenberg. *Astrophys. J.* 215, 1977, 329.
- 1.211     Plasma Diagnostics Using High Resolution Spectroscopic Techniques. U. Feldman and G. A. Doschek. *J. Opt. Soc. of Am.* 67, 1977, 726.
- 1.212     Structure and Dynamics of a Solar Flare: X-Ray and XUV Observations. K. P. Dere, D. M. Horan and R. W. Kreplin. *Astrophys. J.* 217, 1977, 976.
- 1.213     Forbidden Lines of the Solar Corona and Transition Zone 2955 Å - 3000 Å. G. D. Sandlin, G. E. Brueckner and R. Tousey. *Astrophys. J.* 214, 1977, 898.
- 1.214     The Thermal and Non-Thermal Flare: A Result of Non-Linear Threshold Phenomena During Magnetic Field Line Reconnection. D. S. Spicer. *Solar Physics* 53, 1977, 249.
- 1.215     The Extreme Ultraviolet Spectroheliograph ATM Experiment S082B. R. Tousey, J. D. F. Bartoe, G. E. Brueckner and J. D. Purcell. *Applied Optics* 16, 1977, 870.
- 1.216     Experience with Schumann-Type XUV Film on Skylab. M. E. VanHoosier, J. D. F. Bartoe, G. E. Brueckner, N. P. Patterson, and R. Tousey. *Applied Optics* 16, 1977, 887.

- 1.217 Observing and Recording Instantaneous Images on ATM Television Monitors. N. P. Patterson, R. Tousey and W. A. Delamere. Applied Optics 16, 1977, 922.
- 1.218 Comparison of Flare Bremsstrahlung Resulting from Energetic Thermal and Non-Thermal Electrons. J. Davis and J. Rogerson. Solar Physics 51, 1977, 185.
- 1.219 Observations of Limb Flares with a Soft X-Ray Telescope. E. G. Gibson. Solar Physics 53, 1977, 123.
- 1.220 Bright X-Ray Arcs and the Emergence of Solar Magnetic Flux. G. A. Chapman and R. M. Broussard. Astrophys. J. 216, 1977, 940.
- 1.221 Non-Compressive Density Enhancements in the Solar Wind. J. T. Gosling, E. Hildner, J. R. Asbridge, S. J. Bane and W. C. Feldman. J. Geophys. Res. 82, 1977, 5005-5010.
- 1.222 The Radiance Calibration of the High Altitude Observatory White Light Coronagraph on Skylab. A. I. Poland, J. T. Gosling, R. M. MacQueen and R. H. Munro. Applied Optics 16, 1977, 926.
- 1.223 Numerical Image Manipulation and Display in Solar Astronomy. R. H. Levine and J. C. Flagg. Applied Optics 16, 1977, 938.
- 1.224 Physics of an Active Region Loop System. R. H. Levine and G. L. Withbroe. Solar Physics 51, 1977, 83.
- 1.225 Evolution of Open Magnetic Fields on the Sun, the Skylab Period. R. H. Levine. Astrophys. J. 218, 1977, 291.
- 1.226 Open Magnetic Structures on the Sun. R. H. Levine, M. D. Altschuler, J. W. Harvey and B. V. Jackson. Astrophys. J. 215, 1977, 636.
- 1.227 Mass and Energy Flow in the Solar Chromosphere and Corona. G. L. Withbroe and R. W. Noyes. Annual Rev. of Astronomy and Astrophysics 15, 1977, 363-387.
- 1.228 EUV Analysis of Polar Plumes. I. A. Ahmad and G. L. Withbroe. Solar Physics 53, 1977, 397.
- 1.229 Radio and EUV Observations of a Coronal Hole. G. A. Dulk, K. V. Sheridan, S. F. Smerd and G. L. Withbroe. Solar Physics 52, 1977, 349.

- 1.230    Open Magnetic Fields in Active Regions. Z. Svestka, C. V. Solodyna, R. Howard and R. H. Levine. Solar Physics 55, 1977, 359.
- 1.231    Coronal Mass-Ejections-Kinematics of the 19 December 1973 Event. E. J. Schmahl and E. Hilder. Solar Physics 55, 1977, 473.
- 1.232    X-Ray Spectrum of a High Temperature Plasma. J. C. Raymond and B. W. Smith. Astrophys. J. Supp. 35, 1977, 419.
- 1.233    The Effect of Sunspots and Faculae on the Solar Constant. P. V. Foukal, P. E. Mack and J. E. Vernazza. Astrophys. J. 215, 1977, 952.
- 1.234    High Resolution Mapping of the Magnetic Field of the Solar Corona. M. D. Altschuler, R. H. Levine, M. Stix and J. Harvey. Solar Physics 51, 1977, 345.
- 1.235    Molecular Oxygen Concentrations and Absorption Cross Sections in the Thermosphere Derived from Extreme Ultraviolet Occultation Profiles. O. K. Garriott, R. B. Norton and J. G. Timothy. J. of Geophys. Res. 82, 1977, 4973.
- 1.236    The Extreme Ultraviolet Spectroheliometer on ATM. E. M. Reeves, M. C. E. Huber and J. G. Timothy. Applied Optics 16, 1977, 837.
- 1.237    Preliminary Results with Micro-Channel Array Plates Employing Curved Microchannels to Inhibit Ion-Feedback. J. G. Timothy and R. L. Bybee. Review of Scientific Instrumentation 48, 1977, 292.
- 1.238    Transequatorial Loops Interconnecting McMath Regions 12472 and 12474. Z. Svestka, A. S. Krieger, R. C. Chase and R. Howard. Solar Physics 52, 1977, 69-90.
- 1.239    Determination of Plasma Parameters from Soft X-Ray Images for Coronal Holes (Open Magnetic Field Configurations) and Coronal Large-Scale Structures (Extended Closed-Field Configurations). C. W. Maxson and G. S. Vaiana. Astrophys. J. 215, 1977, 919-941.
- 1.240    Magnetic Properties of X-Ray Bright Points. L. Golub, J. W. Harvey, A. S. Krieger and G. S. Vaiana. Solar Physics 53, 1977, 111-121.

- 1.241 A Survey of Soft X-Ray Limb Flare Images: The Relationship Between Their Structure in the Corona and Other Physical Parameters. R. Pallavicini, S. Serio and G. S. Vaiana. *Astrophys. J.* 216, 1977, 108-122.
- 1.242 Hydrostatic and Dynamic Models of Solar Coronal Holes. R. Rosner and G. S. Vaiana. *Astrophys. J.* 216, 1977, 141-157.
- 1.243 Dilation of Force-Free Magnetic Flux Tubes. S. Frankenthal. *Astrophys. J. Lett.* 215, 1977, L131-134.
- 1.244 Observations of the Birth of a Small Coronal Hole. C. V. Solodyna, A. S. Krieger and J. T. Nolte. *Solar Physics* 54, 1977, 123.
- 1.245 On the Nature of Photospheric Magnetic Fields Beneath Large Coronal Holes. S. Frankenthal and A. S. Krieger. *Solar Physics* 54, 1977, 83-97.
- 1.246 H-Alpha Macrospicules: Identification with EUV Macrospicules and with Flares in X-Ray Bright Points. R. L. Moore, F. Tang, J. D. Bohlin and L. Golub. *Astrophys. J.* 218, 1977, 286-290.
- 1.247 Statistical Analysis of Coronal Magnetic Structure During the First Year of Solar Cycle 20. J. T. Nolte and E. C. Roelof. *J. Geophys. Res.* 82, 1977, 2175-2186.
- 1.248 The Morphological and Statistical Properties of X-Ray Events with Long Decay Times. S. Kahler. *Astrophys. J.* 214, 1977, 891-897.
- 1.249 Soft X-Ray Observations of Large-Scale Coronal Active Region Brightenings. D. M. Rust and D. F. Webb. *Solar Physics* 54, 1977, 403-417.
- 1.250 Do Surges Heat the Corona? D. M. Rust, D. F. Webb and W. MacCombie. *Solar Physics* 54, 1977, 53-56.
- 1.251 Open Magnetic Fields in Active Regions. Z. Svestka, C. V. Solodyna, R. Howard, R. H. Levine. *Solar Physics* 55, 1977, 359-369.
- 1.252 Development of a Complex of Activity in the Solar Corona. R. Howard and Z. Svestka. *Solar Physics* 54, 1977, 65.
- 1.253 A Comparison of Solar Wind Streams and Coronal Structure Near Solar Minimum. J. T. Nolte, J. M. Davis, M. Gerassimenko, A. J. Lazarus and J. D. Sullivan. *Geophys. Res. Lett.* 4, 1977, 291-294.

- 1.254 Solar Cycle Variation of Magnetic Flux Emergence. J. M. Davis, L. Golub and A. S. Krieger. *Astrophys. J. Lett.* 214, 1977, L141-144.
- 1.255 The Gross Energy Balance of Solar Active Regions. K. D. Evans, J. P. Pye, R. J. Hutcheon, M. Gerassimenko, A. S. Krieger, J. M. Davis and J. F. Veseky. *Solar Physics* 55, 1977, 387-392.
- 1.256 An Emerging Flux Model for Solar Flares. J. Heyvaerts, E. Priest and D. M. Rust. 16th Gen. Assembly IAU, Grenoble, France, 27 August 1976. *Solar Physics* 53, 1977, 255-258.
- 1.257 Measurement of Scray Radiance in the High Altitude Observatory's Skylab Coronagraph. A. Csoeke-Poeckh, R. M. MacQueen and A. I. Poland. *Applied Optics* 16, 1977, 931.
- 1.258 Do Changes in Coronal Emission Structure Imply Magnetic Reconnections? J. T. Nolte, M. Gerassimenko, A. S. Krieger, R. D. Petrasso, Z. Svestka and D. G. Wentzel. *Solar Physics* 55, 1977, 401-412.
- 1.259 The Analysis of Solar X-Ray Photographs, I: General Methods. J. H. Underwood and D. L. McKenzie. *Solar Physics* 53, 1977, 417.
- 1.260 Solar Wind, Energetic Particles and Coronal Magnetic Structure: The First Year of Solar Cycle 20. J. T. Nolte and E. C. Roelof. *J. Geophys. Res.* 82, 1977, 2175.
- 1.261 Physical Parameters Defining the Changing Structure of a Coronal Hole. J. A. Vorpahl and R. M. Broussard. *Astrophys. J.*, Jan. 1, 1978.
- 1.262 Differential Rotation Rates for Short-Lived Regions of Emerging Magnetic Flux. L. Golub and G. S. Vaiana. *Astrophys. J. Lett.* 219, 1978, L55-57.
- 1.263 Magnetohydrodynamics of Atmospheric Transients. II. Two-Dimensional Numerical Results for a Model Solar Corona. S. T. Wu, M. Dryer, Y. Nakagawa and S. M. Han. *Astrophys. J.* 219, 1978, 324.
- 1.264 Analysis of X-Ray Observations of the 15 June 1973 Flare in Active Region NOAA 131. K. R. Krall, E. J. Reichmann, R. M. Wilson, W. Henze, Jr. and J. B. Smith, Jr. *Solar Physics* 56, 1978.

- 1.265     Magnetohydrodynamics of Atmospheric Transients. I. Basic Results of Two-Dimensional Plane Analysis. Y. Nakagawa, S. T. Wu and S. M. Han. *Astrophys. J.* 219, 1978, 314.
- 1.266     The Solar XUV He I and He II Emission Lines. I. Intensities and Cross Center-to-Limb Behavior. S. A. Mango, J. D. Bohlin, D. L. Glackin and J. L. Linsky. *Astrophys. J.* 220, 1978.

## 2. JOURNAL PUBLICATIONS SUBMITTED

- 2.145    The Temperature and Density Structure of Active Coronal Loops. I. J. D. Craig and A. N. McClymont and J. H. Underwood. Accepted for publication - Astronomy & Astrophysics.
- 2.146    Evolution of the Coronal and Transition Zone Plasma in a Compact Flare - The Event of 1973 August 9th. J. H. Underwood, S. K. Antiochos, U. Feldman and K. P. Dere. Submitted to Astrophys. J.
- 2.147    Evidence Linking Coronal Transients to the Evolution of Coronal Holes. D. F. Webb, P. S. McIntosh, J. T. Nolte and C. V. Solodina. Solar Physics - In Press.
- 2.148    A Physical Parameter Method for the Design of Broad-Band X-Ray Imaging Systems to Do Coronal Plasma Diagnostics. S. Kahler and A. S. Krieger. Solar Physics - In Press.
- 2.149    Coronal Hole Evolution by Sudden Large Scale Changes. J. T. Nolte, M. Gerassimenko, A. S. Krieger and C. V. Solodina. Solar Physics - In Press.
- 2.150    Thermally Conductive Flows in Coronal Holes. R. S. Steinolfson and E. Tandberg-Hanssen. Solar Physics - In Press.
- 2.151    MHD Models of Coronal Transients in the Meridional Plane. I. The Effect of Magnetic Field. R. S. Steinolfson, S. T. Wu, M. Dryer and E. Tandberg-Hanssen. Astrophys. J. - In Press.
- 2.152    Solar and Cosmic Transients: Constraints for Models for Energy Storage and Release Derived from the Event Frequency Distribution. R. Rosner and G. S. Vaiana. Astrophys. J. - In Press.
- 2.153    Solar Flares. D. M. Rust. Solar System Plasma Physics. Eds. C. F. Kennel, L. J. Lanzerotti and E. N. Parker - In Press.
- 2.154    The Physical Nature of Interconnecting Coronal Loops. Z. Svestka. Solar Physics - In Press.
- 2.155    Short Term Evolution of Coronal Hole Boundaries. J. T. Nolte, A. S. Krieger and D. V. Solodina. Solar Physics - In Press.



- 2.156 The Association of Nonthermal Electrons with Non-Flaring Coronal Transients. D. F. Webb and M. R. Kundu. Solar Physics - In Press.
- 2.157 The Decay of Coronal Loops Brightened by Flares and Transients. A. S. Krieger. Solar Physics - In Press.
- 2.158 Prompt Solar Proton Events and Coronal Mass Ejections. S. W. Kahler, E. Hildner and M. A. I. Van Hollebeke. Solar Physics - In Press.
- 2.159 Observational Evidence of Continual Heating in X-Ray Emitting Coronal Loops. M. Gerassimenko, C. V. Solodyna and J. T. Nolte. Solar Physics - In Press.
- 2.160 Dynamics of the Quiescent Solar Corona. R. Rosner, W. H. Tucker and G. S. Vaiana. Astrophys. J. - In Press.
- 2.161 Advances in Coronal Physics. G. S. Vaiana and R. Rosner. 1978 Ann. Rev. Astron. Astrophys. 16 - In Press.
- 2.162 Heating of Coronal Plasma by Anomalous Current Dissipation. R. Rosner, L. Golub, B. Coppi and G. S. Vaiana. Astrophys. J. - In Press.
- 2.163 The Structure of the X-Ray Bright Corona Above Active Region McMath 12628 and Derived Implications for the Description of Equilibria in the Solar Atmosphere. J. P. Pye, K. D. Evans, R. J. Hutcheon, M. Gerassimenko, J. M. Davis, A. S. Krieger and J. F. Vesecky. Astronomy and Astrophysics - In Press.
- 2.164 Expansion and Broadening of Coronal Loop Transients: A Theoretical Explanation. T. Ch. Mouschovias and A. I. Poland. Astrophys. J. - In Press.
- 2.165 Temporal Evolution of the Equatorial K-Corona. R. M. MacQueen and A. I. Poland. Solar Physics - In Press.
- 2.166 Motions and Mass Changes of a Persistent Coronal Streamer. A. I. Poland. Solar Physics - In Press.
- 2.167 Coronal Mass Ejections--Kinematics of the 19 December 1973 Event. E. Schmahl and E. Hildner. Solar Physics - In Press.
- 2.168 A Study of the Background Corona Near Solar Minimum. K. Saito, A. I. Poland and R. H. Munro. Solar Physics - In Press.

- 2.169 Prompt Solar Proton Events and Coronal Mass Ejections. S. W. Kahler, E. Hildner and M. A. I. Van Hollebeke. Solar Physics - In Press.
- 2.170 Nebular Observations and Stellar Coronae. L. W. Hartmann and J. C. Raymond. Astrophys. J. - In Press.
- 2.171 Optical Design of a Stigmatic Spectroheliometer for Photometric Studies of Dynamic Phenomena at Extreme-Ultraviolet Wavelengths. M. C. E. Huber and J. G. Timothy. Space Sci. Inst. - In Press.
- 2.172 EUV Structure of a Small Flare. R. H. Levine. Solar Physics-In Press.
- 2.173 On Dielectronic Recombination and Resonances in Excitation Cross Sections. J. C. Raymond - Astrophys. J. - In Press.
- 2.174 C III Density Diagnostics in Non-Equilibrium Plasmas. J. C. Raymond and A. K. Dupree. Astrophys. J. - In Press.
- 2.175 Extreme Ultraviolet Spectrum of the Sun. E. M. Reeves and J. E. Vernazza. Astrophys. J. - In Press.
- 2.176 Pre-Onset Morphology of the 5 September 1973 Flare. E. Schmahl, S. V. Solodina, J. B. Smith and C. C. Cheng. Submitted to Solar Physics.
- 2.177 Spatial Structures of Coronal Loops in XUV Observed from Skylab. C. C. Cheng. Submitted to Solar Physics.
- 2.178 The Continuum Emissions in a Solar Flare: 1400-1960 Å. C. C. Cheng and O. K. Moe. Submitted to Solar Physics.
- 2.179 Analysis of the Emission Line Spectra of Solar Flares Observed from Skylab. C. C. Cheng. Submitted to Solar Physics.
- 2.180 Densities in the Quiet Sun and Polar Coronal Holes from EUV Line Ratios Involving O III (1666.15 Å). G. A. Doschek, U. Feldman, A. K. Bhatia and H. E. Mason. Submitted to Astrophys. J.
- 2.181 Analysis of the EUV Emission Spectra of a Fluctuating Bright Point Observed from Skylab. C. C. Cheng and U. Feldman. Submitted to Astrophys. J.

- 2.182 Emission Line Spectra of Two Active Regions on the Solar Limb (1175 - 1940 Å). U. Feldman and G. A. Doschek. Submitted to Astrophys. J. Supp.
- 2.183 EUV Spectra from Skylab (1175 - 1940 Å): Mass Motions in the Transition Zone in Regions of Solar Activity. G. A. Doschek and U. Feldman. Submitted to Astronomy and Astrophysics.
- 2.184 Effects of Collisions on Level Populations and Dielectronic Re-Combination Rates of Multiple-Charged Ions. V. L. Jacobs and J. Davis. Submitted to Physical Rev.
- 2.185 The Solar XUV Spectrum of Ca II. G. D. Sandlin, J. D. F. Bartoe and G. E. Brueckner. Submitted to Astrophys. J. Lett.
- 2.186 Measurements of Spectrally Integrated Atmospheric Transmittance in the O<sub>2</sub> Schumann-Range Bands and Derived Oxygen Column Densities: 76 km to 102 km. M. S. Longmire, J. D. F. Bartoe, G. E. Brueckner and R. Tousey. Submitted to J. of Geophys. Res.
- 2.187 On the Forbidden Lines of the Solar Corona: 1775 - 1965 Å. G. D. Sandlin, G. E. Brueckner and R. Tousey. Submitted to Astrophys. J. Lett.
- 2.188 Solar C III Line Ratios Observed from Skylab. J. W. Cook and K. R. Nicolas. Submitted to Astrophys. J.
- 2.189 Density Diagnostics in the Extreme Ultraviolet Solar Spectrum: Si II: Si II Emission Line Ratios. K. R. Nicolas, J. D. F. Bartoe, G. E. Brueckner and M. E. Van Hoosier. Submitted to Astrophys. J.
- 2.190 ATM Evidence for a Low Nonthermal Proton/Electron Flux Ratio in Solar Flares. R. C. Canfield and J. W. Cook. Submitted to Astrophys. J.
- 2.191 A Single Loop of 21 January 1974 Flare. E. Hiei and K. G. Widing. Submitted to Solar Physics.
- 2.192 Skylab X-Ray and XUV Observations of a Small Solar Flare. E. Tandberg-Hanssen, N. R. Sheeley, Jr., and J. B. Smith, Jr. Submitted to Solar Physics.
- 2.193 The Solar XUV He and He II Emission Lines. II. Intensity Ratios and Distribution Functions. D. L. Glackin, J. L. Linsky, S. A. Mango and J. D. Bohlin. Submitted to Astrophys. J.

- 2.194     The Equatorward Extent of Auroral Activity During 1973-1974.  
N. R. Sheeley, Jr. Submitted to Solar Physics.
- 2.195     CO Fluorescence in the Extreme Ultraviolet Solar Spectrum.  
J. D. F. Bartoe, G. E. Brueckner and G. D. Sandlin and M. E.  
Van Hoosier. Submitted to Astrophys. J. Lett.
- 2.196     Leading Atomic Lines Present in Solar Spectra: H through Ca.  
C. E. Moore. Submitted to Optical Puray Aplicada.
- 2.197     Limb Darkening  $1945 \text{ \AA}$  to  $3245 \text{ \AA}$  for the Quiet Sun from Skylab  
Data. O. K. Moe and E. F. Milone. Submitted to Astrophys.  
J. Supp.
- 2.198     The Electron Density at  $10^5 \text{ K}$  in Different Regions of the  
Solar Atmosphere Derived from an Intersystem Line of O IV.  
U. Feldman and G. A. Doschek. Submitted to Astronomy and  
Astrophysics.
- 2.199     Extreme Ultraviolet Observations of Coronal Holes: II.  
Association of Holes with Solar Magnetic Fields and a Model  
for Their Formation During the Solar Cycle. J. D. Bohlin  
and N. R. Sheeley, Jr. Solar Physics - In Press.
- 2.200     Spectral Lines Observed in Solar Flares Between 171 and 630  
Angstroms. K. P. Dere. Submitted to Astrophys. J.
- 2.201     Hydrodynamic Simulations. R. S. Steinolfson, E. Schmahl  
and S. T. Wu. Submitted to Astrophys. J.
- 2.202     Association Between Solar X-Ray Loops and Type III Bursts.  
R. Stewart and J. A. Vorpahl. Accepted by Solar Physics.
- 2.203     Time Varying Oscillations in the Solar Soft X-Ray Flux as  
Observed from Skylab. D. L. Teuber, R. M. Wilson, and W.  
Henze. Astronomy and Astrophysics - In Press.
- 2.204     Numerical Study of an Explosion in a Nonhomogeneous Medium  
With and Without Magnetic Field. S. M. Han, S. T. Wu and  
Y. Nakagawa. Submitted to Computer and Fluids.
- 2.205     Dynamic MHD Modeling of Solar Wind Corotating Stream Inter-  
action Region Observed by Pioneer 10 and 11. M. Dryer, Z. K.  
Smith, J. D. Mihalov, J. H. Wolfe, R. S. Steinolfson and S. T.  
Wu. Submitted to J. Geophys. Res.

- 2.206 Two-Dimensional, Time-Dependent MHD Description of Interplanetary Disturbances: I. Simulation of Stream-Stream Interactions. S. T. Wu, S. M. Han and M. Dryer. Submitted to Planetary and Space Sci.
- 2.207 Comparison of Measured and Calculated Potential Magnetic Fields. M. J. Hagyard and D. L. Teuber. Submitted to Solar Physics.
- 2.208 Non-Force-Free Solar Magnetic Field in Magnetohydrostatic Equilibrium. R. H. Comfort, E. Tandberg-Hanssen and S. T. Wu. Submitted to Astrophys. J.
- 2.209 Physical Parameter Analysis of an Intense Compact Subflare. R. M. Wilson, J. B. Smith, Jr. and D. M. Speich. Submitted to Astronomy and Astrophysics.
- 2.210 Coronal Changes Associated with the Emergence of Magnetic Flux. J. B. Smith, K. Krall, S. T. Wu and E. Tandberg-Hanssen. Submitted to Solar Physics.
- 2.211 Thermal Structure of an EFR and a Subflare: 31 August 1973. E. Tandberg-Hanssen, J. B. Smith, Jr., and N. Sheeley. Submitted to Solar Physics.
- 2.212 Global Constant-~~α~~ Force Free Magnetic Fields and Coronal Structures. S. T. Wu, Y. Nakagawa and E. Tandberg-Hanssen. Submitted to Astronomy and Astrophysics.
- 2.213 The Structure of the X-Ray Bright Corona Above Active Region McMath 12628 and Derived Implications for the Description of Equilibrium in the Solar Atmosphere. J. P. Pye, K. D. Evans, R. J. Hutcheon, M. Gerassimenko, J. M. Davis, A. S. Krieger and J. F. Vesecky. Submitted to Astronomy and Astrophysics.
- 2.214 Coronal Magnetic Fields. G. A. Dulk and D. J. McLean. Submitted to Solar Physics.
- 2.215 The Association of Coronal Transients with Other Forms of Solar Activity. R. H. Munro, J. T. Gosling, E. Hildner, R. M. MacQueen, A. I. Poland and C. L. Ross. Submitted to Solar Physics.
- 2.216 X-Ray Analysis of Polar Plumes. I. A. Ahmad and D. F. Webb. Submitted to Solar Physics.
- 2.217 Comparison of a Flaring X-Ray Kernel to a Resistive Merging Model. R. Petraso, M. Gerassimenko and J. Nolte. Submitted to Astrophys. J.

- 2.218 The Characteristics of Impulsive Solar EUV Bursts. A. G. Emslie and R. W. Noyes. Submitted to Solar Physics.
- 2.219 The Collisional Interaction of a Beam of Charged Particles with a Hydrogen Target of Arbitrary Ionization Level. E. G. Emslie. Submitted to Astrophys. J.
- 2.220 Magnetic Loops, Downflows and Convection in the Solar Corona. P. V. Foukal. Submitted to Astrophys. J.
- 2.221 The Origin of the Interplanetary Magnetic Field: The Other Solar Flux Problem. R. H. Levine. Submitted to Astrophys. J. Lett.
- 2.222 The Relation of Open Magnetic Structures to Solar Wind Flow. R. H. Levine. Submitted to J. of Geophys. Res.
- 2.223 The Structure of the Temperature-Minimum Region in Solar Flares and Its Significance for Flare Heating Mechanisms. M. E. Machado, A. G. Emslie and J. C. Brown. Submitted to Solar Physics.
- 2.224 Analysis of Extreme Ultraviolet Observations of a Polar Coronal Hole. J. T. Mariska. Submitted to Astrophys. J.
- 2.225 The Rapid Heating of Coronal Plasma During Solar Flares: Nonequilibrium Ionization Diagnostics and Reverse Currents. P. R. Shapiro and J. W. Knight. Submitted to Astrophys. J.
- 2.226 Bowen Fluorescence in the Solar Transition Region. J. C. Raymond. Submitted to Astrophys. J.
- 2.227 The Thermal Phase of a Large Solar Flare. G. L. Withbroe. Submitted to Astrophys. J.
- 2.228 Evidence for Long-Term Variations in the Quiet Sun Emission at EUV Wavelengths. J. G. Timothy. Submitted to Astrophys. J. Lett.
- 2.229 Do Magnetic Fields Heat or Cool the Solar Corona? P. V. Foukal. Submitted to Astrophys. J.

### 3. OTHER PUBLICATIONS

- 3.93     Some Aspects of Magnetic Field Dynamics in Astrophysical Plasmas. R. Rosner. Ph.D. Thesis, 1975, Harvard University, Cambridge, Massachusetts.
- 3.94     Risultati Sperimentali E Modello Idrodinamico Di Fenomeni Transienti Del Plasma Confinato Da Campo Magnetico Nella Corona Solare. G. Peres. Thesis, 1976, University of Palermo, Italy.
- 3.95     The Physical Properties of Coronal Hole. J. D. Bohlin. Physics of Solar Planetary Environments. Ed. D. J. Williams. Vol. 1, 1976, 114.
- 3.96     Prominences. E. Tandberg-Hanssen. Transactions IAU. Vol. XVI, Reports, 1976, Commission 10.
- 3.97     Users' Guide to the Data Obtained by the Skylab/ATM NASA-Marshall Space Flight Center. W. Henze, editor. NASA TMX-73369, MSFC, 1976.
- 3.98     The Profile of the  $977 \text{ \AA}$  Line of C III. O. K. Moe, K. R. Nicolas and J. D. F. Bartoe. The Solar Output and Its Variation. Ed. O. R. White, 1977, 234-236.
- 3.99     The MSFC Image Data Processing System - IDAPS. R. M. Wilson, D. L. Teuber, J. R. Watkins, D. T. Thomas and C. M. Cooper. IEEE Computer Magazine, Aug. 1977, 37.
- 3.100    Models of the Solar Atmosphere. E. H. Avrett. The Solar Output and Its Variation. Ed. O. R. White. Colorado Assoc. Univ. Press, 1977, 327-348.
- 3.101    A Long-Lived Coronal X-Ray Arcade. J. P. McGuire, E. Tandberg-Hanssen, K. R. Krall, S. T. Wu, J. B. Smith and D. M. Speich. NASA TMX-73362, MSFC, 1977.
- 3.102    The Analysis of the X-Ray Event Analyzer Proportional Counter Data: A Comment. R. M. Wilson. NASA TMX-78367, MSFC, 1977.
- 3.103    Observations of the X-Ray Source Sco X-1 from Skylab. R. M. Wilson. NASA TMX-73376, MSFC, 1977.

- 3.104 The Effect of the Magnetic Field on Coronal Transients. R. S. Steinolfson, S. T. Wu, M. Dryer and E. Tandberg-Hanssen. Study of Traveling Interplanetary Phenomena. Eds. M. A. Shea, D. F. Smart and S. T. Wu. Air Force Geophysical Lab Pub., Dec. 1977.
- 3.105 Dynamic Modeling of Corona and Interplanetary Responses to Solar Events. S. T. Wu, Y. Nakagawa and M. Dryer. Invited Review. Study of Traveling Interplanetary Phenomena. Eds. M. A. Shea, D. F. Smart and S. T. Wu. Astrophysic and Space Sci. Library, Vol. 71, 1977, D. Reidel Publ. Co., Dordrecht, Holland.
- 3.106 UV and X-Ray Spectroscopy in Astrophysics. A. K. Dupree. Advances in Atomic and Molecular Physics. Eds. D. R. Bates and B. Bederson. Academic Press, New York, Vol. 14, 1978.

Coronal Holes and High Speed Wind Streams. J. B. Zirker, editor. A Monograph from Skylab Solar Workshop I. Col. Assoc. Univ. Press, 1977:

- 3.107 Chapter I. Coronal Holes - An Overview. J. B. Zirker, 1977, 1-27.
- 3.108 Chapter II. An Observational Definition of Coronal Holes. J. D. Bohlin, 1977, 27-71.
- 3.109 Chapter III. Temporal Behaviour of Coronal Holes. A. S. Krieger, 1977, 71-102.
- 3.110 Chapter IV. Large-Scale Solar Magnetic Fields and Coronal Holes. R. H. Levine, 1977, 103-145.
- 3.111 Chapter V. The Chromospheric and Transition Layers in Coronal Holes. G. L. Withbroe, 1977, 145-178.
- 3.112 Chapter VI. Models of Coronal Holes Above the Transition Region. R. A. Kopp, 1977, 179-216.
- 3.113 Chapter VII. An Interplanetary View of Coronal Holes. A. J. Hundhausen, 1977, 225-319.
- 3.114 Chapter VIII. Coronal Holes and the Sun's Interior. P. A. Gilman, 1977, 331-370.
- 3.115 Chapter IX. Geomagnetic Activity; Dependence on Solar Wind Parameters. L. Svalgaard, 1977, 371-437.



- 3.116 Solar Flares. D. M. Rust. Solar System Plasma Physics, A 20th Anniversary Review. Ed. C. F. Kennel, L. J. Lanzerotti and E. N. Parker, 1977.
- 3.117 The Primary Energy Release in Reconnection Flare Models. D. S. Spicer. NRL Memorandum Report 3749.
- 3.118 Ionization Equilibrium and Radiative Energy Loss Rates for C, N, and O Ions in Low-Density Plasmas. V. L. Jacobs, J. Davis, J. E. Rogerson and M. Blaha. NRL Memorandum Report 3572.
- 3.119 NRL/ATM User's Guide to Experiment S082B. I. G. Packer and R. Tousey. NRL Memorandum Report 3738.
- 3.120 A Brief Review of Some Recent Results that Can Improve Our Theoretical Understanding of Magnetic Field Reconnection and Thermalization as Applicable to Solar Flares. D. S. Spicer. NRL Memorandum Report 3465.
- 3.121 Coronal Hole Boundaries, December 26, 1973 to January 24, 1974. C. V. Solodyna, J. T. Nolte and A. S. Krieger. AS&E Memorandum to the Skylab Solar Workshop.
- 3.122 Film Calibration for the Skylab/ATM S-056 X-Ray Telescope. W. Henze, R. M. Broussard, J. H. Underwood, J. P. McGuire, E. J. Reichmann and J. B. Smith. NASA TMX-78122, MSFC, 1977.

#### 4. PRESENTATIONS - NATIONAL AND INTERNATIONAL MEETINGS

- 4.416 Simulated Traveling Interplanetary Disturbances Initiated by Various Solar Phenomena. S. T. Wu, M. Dryer, R. S. Steinolfson. 18th Plenary Meeting of COSPAR, May 29-June 7, 1975, Varna, Bulgaria.
- 4.417 Radiation Transitions from Double-Excited States of Helium and Helium-Like Ions in Plasmas. V. Jacobs and J. Davis. 9th Int. Conf. on the Physics of Electron and Atomic Collisions, Seattle, Washington, 1975.
- 4.418 Skylab and the AS&E X-Ray Telescope Experiment: A New View of the X-Ray Corona. G. S. Vaiana, R. Chase, J. Davis, M. Gerassimenko, L. Golub, S. Kahler, A. S. Krieger, R. Petrasso, J. K. Silk, R. Simon, A. F. Timothy, M. Zombeck and D. Webb. Oss. e Mem. dell Osser. Astro. Ancetric, Florence, 104, 1975, 3.
- 4.419 Observations of a Kink Instability in a Solar Flare. C. C. Cheng. XVI Gen. Assem. of IAU Commission 14, Grenoble, France, Aug. 17, 1976, 31.
- 4.420 Dynamics of the Solar Atmosphere from the Lower Chromosphere into the Corona. G. E. Brueckner and J. D. F. Bartoe. IAU Colloquium #36, Nice, France, Sept. 6-10, 1976, 31.
- 4.421 Dynamic MHD Models of Solar-Initiated Disturbances from the Lower Corona to 10 A.U. M. Dryer, D. S. Intriligator, E. J. Smith, S. T. Wu, R. S. Steinolfson and J. H. Wolf. 16th Gen. Assembly of IAU, Commission 49, Grenoble, France, Aug. 24-Sept. 2, 1976.
- 4.422 Numerical MHD Simulation of Dynamic Processes in the Lower Corona and Their Responses in Interplanetary Space. M. Dryer, S. T. Wu, S. M. Han and R. S. Steinolfson. 3rd European Geophysical Soc. Meeting, Amsterdam, Holland, Sept. 7-10, 1976.
- 4.423 Formation of the He I and He II Lines in the Solar Atmosphere. E. H. Avrett, J. E. Vernazza and J. L. Linsky. Bull. A.A.S. 8, 1976, 534.
- 4.424 On the Anti-Correlation of Solar Wind Density and Temperature During the So-Called "Non-Compressive Density Enhancement." S. T. Wu, M. Dryer and R. S. Steinolfson. Fall Meeting AGU, San Francisco, California. Abstract EOS 57, 1976.

- 4.425     Influence of Plasmas on Spectral Line Shapes Arising from Atomic Levels above the Ionization Threshold. J. Davis and V. L. Jacobs. Int. Conf. on Spectral Line Shapes, London, England, 1976.
- 4.426     Influence of Electric Fields on Autoionization and Dielectronic Recombination. V. Jacobs and J. Davis. 5th Int. Conf. on Atomic Physics, Berkeley, California, 1976.
- 4.427     Detecting Ultraviolet Radiation from and through the Atmosphere. D. K. Prinz. SPIE Vol. 91, Methods for Atmospheric Radiometry, 1976, 2-11.
- 4.428     Models of Solar Chromosphere Structures Implied by Lyman-Rocket Spectra. G. Basri, J. L. Linsky, J. D. F. Bartoe, G. E. Brueckner and M.E. VanHoosier. 149th A.A.S., Honolulu, Hawaii, Jan 16-29, 1977.
- 4.429     The Solar Wind and Coronal Structure in September/November 1976. J. D. Sullivan, A. J. Lazarus, J. Nolte, J. Davis and M. Gerassimenko. Spring AGU Meeting, Washington, DC, May 30-June 3, 1977.
- 4.430     Solar Spectral Irradiance in the Vacuum U.V. G. E. Brueckner. Symp. on Ultraviolet Radiation Measurements for Environmental Protection and Public Safety. National Bureau of Standards, June 8-9, 1977.

COSPAR/IAU Symposium on New Instrumentation for Space Astronomy, Solar X-Ray and UV Instrumentation, Tel Aviv, Israel, June 8-10, 1977:

- 4.431     Solar X-Ray Imaging Techniques, Past and Future: The Sun as a Laboratory Plasma. G. S. Vaiana - Invited.
- 4.432     Applications of a New High Spatial and Spectral Resolution Spectrograph Design Principle to Solar and Stellar Ultraviolet Spectroscopy. J.D.F. Bartoe and G. E. Brueckner.
- 4.433     Progress Report on Multi-Anode Microchannel Arrays. J. G. Timothy.

20th Plenary Meeting of COSPAR. Tel Aviv, Israel, June 7-10, 1977:

- 4.434 Soft X-Ray Manifestation of Coronal Transient-Related Events. J. B. Smith, Jr., D. M. Speich, E. Tandberg-Hanssen, R. M. Wilson and E. J. Reichmann.
- 4.435 Solar X-Ray Transients in Magnetically Confined Plasma: Observational Data and Hydrodynamic Model. G. Peres, S. Serio, G. S. Vaiana and R. Rosner.
- 4.436 The Dynamic X-Ray Corona. G. S. Vaiana.
- 4.437 Dynamical Behaviour of Coronal Cavities, Prominence Material and Magnetic Field. S. Serio, G. S. Vaiana, G. Godoli, S. Motta, V. Pirronello and R. A. Zappala.
- 4.438 Mass Ejections from the Solar Corona Into Interplanetary Space. E. Hildner. L. D. deFeiter Memorial Symposium (Prior to COSPAR 20th Plenary Session), Tel Aviv, Israel, 7-10 June, 1977.
- 4.439 Mass Ejections from the Solar Corona into Interplanetary Space. E. Hildner. Proceedings of the L. D. deFeiter Memorial Symposium "Study of Traveling Interplanetary Phenomena." Tel Aviv, Israel, June 7-10, 1977. M. A. Shea, et al. ed., D. Reidel Publishing Co., Hingham, Massachusetts, 1978.

150th AAS Meeting, Atlanta, Georgia, June 12-15, 1977:

- 4.440 A Comparison of He II 304 Å and He I 10830 Å Spectroheliograms. J. W. Harvey and N. R. Sheeley, Jr. B.A.A.S. 9, 325.
- 4.441 Fine Structure and Dynamics of the Inner Corona. G. E. Brueckner, J. D. F. Bartoe and M. E. Van Hoosier. B.A.A.S. 9, 370.
- 4.442 Scattering in the Doppler Core of the Solar Lyman- $\alpha$  Line: Its Effect on the Lyman Continuum and on the Chromospheric Electron Number Density. B.A.A.S. 9, 432.
- 4.443 Magnetic Fields and Solar Convection and Rotation. P. V. Foukal. B.A.A.S. 9, 375.

- 4.444 Evolution of Photospheric Magnetic Field Patterns.  
R. H. Levine. B.A.A.S. 9, 371.
- 4.445 A Composite Coronal Hole Model. R. H. Munro and  
J. T. Mariska. B.A.A.S. 9, 370.
- 4.446 The Relationship between EUV Flares and Surges.  
E. J. Schmahl. B.A.A.S. 9, 568.
- 4.447 Skylab EUV Observations of the 7 September 1973  
Flare. G. L. Withbroe and J. E. Vernazza. B.A.A.S.  
9, 299.
- 4.448 Formation of the Solar Mg I Spectrum. A. L. Zachary,  
E. H. Avrett, R. L. Kurucz, R. K. Loeser and J. E.  
Vernazza. B.A.A.S. 9, 568.
- 4.449 Emergence of Small and Large Active Regions in  
X-Rays. S. J. Little and A. S. Krieger. B.A.A.S. 9,  
341.
- 4.450 Observational Evidence of Continuous Heating in  
X-Ray Emitting Coronal Loops. M. Gerassimenko,  
C. V. Solodyna and J. T. Nolte. B.A.A.S. 9, 357.
- 4.451 Open Magnetic Fields in Active Regions. Z. Svestka,  
C. V. Solodyna, R. Howard and R. H. Levine.  
B.A.A.S. 9, 344.
- 4.452 High Time Resolution Observations of Coronal Loop  
Brightenings. C. V. Solodyna, M. Gerassimenko and  
J. T. Nolte. B.A.A.S. 9, 357.
- 4.453 Slowly Moving X-Ray Disturbances from Flares. D. M.  
Rust and Z. Svestka. B.A.A.S. 9, 329-330.
- 4.454 Fourier Analysis of the EUV Chromospheric Network.  
I. A. Ahmad. B.A.A.S. 9, 337.
- 4.455 Variation of Coronal Holes and Associated Solar Wind  
Streams with the Scale Size of Emerging Magnetic  
Flux. J. T. Nolte, J. M. Davis, M. Gerassimenko,  
A. S. Krieger and C. V. Solodyna. B.A.A.S. 9, 346.
- 4.456 Heating of Coronal Plasma by Anomalous Current  
Dissipation. R. Rosner, L. Golub, G. S. Vaiana and  
B. Coppi. B.A.A.S. 9, 370.

- 4.457 Spectral Analysis of the Solar Flare of 5 September 1973. I. Little-Marenin, J. K. Silk and A. S. Krieger. B.A.A.S. 9, 299.
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- 4.470 A Study of the Background Corona Near Solar Minimum. K. Saito, A. I. Poland, R. H. Munro and R. M. MacQueen. B.A.A.S. 9, 371.

4.471 Coronal Holes on the Sun and Their Solar Wind Interaction. R. M. Broussard. Astronomical Society of the Pacific, Claremont, California, June 20-22, 1977.

I.A.U. Colloquium No. 43, Vth Conf. on Ultraviolet and X-Ray Spectroscopy of Astrophysical and Laboratory Plasmas, London, England, July 4-7, 1977:

- 4.472 Stellar Coronae. A. K. Dupree - Invited Review.
- 4.473 Non-Equilibrium Excitation and Ionization of Be-Sequence Ions. J. C. Raymond and A. K. Dupree.
- 4.474 Fine Structure and Dynamics of the Inner Corona. G. E. Brueckner, J. D. F. Bartoe and M. E. Van Hoosier.
- 4.475 Spatially Resolved Observations of Solar Active Regions in Soft X-Rays and Centimetric Wavelengths. R. Pallavicini, G. Tofani and G. S. Vaiana.

4.476 Temporal Evolution of K-Corona. R. MacQueen.

4.477 The Phenomenon of "Overlapping of Resonances" as Applied to Magnetic Reconnection Problems in Space. D. S. Spicer. N. C. Christophilos Summer School and Conf. on Plasma Physics Spetese, Greece, July 1977.

International Association of Geomagnetism and Aeronomy. General Assembly, Seattle, Washington, August 22 to September 3, 1977:

- 4.478 Models of Open Coronal Magnetic Structures and Their Relation to Solar Wind Phenomena. R. H. Levine.
- 4.479 Coronal Holes and Their Solar Wind Associations throughout the Past Sunspot Cycle. R. M. Broussard, J. H. Underwood, N. R. Sheeley and R. Tousey.
- 4.480 Recurrent Minima in Solar Energetic Particle Fluxes and Their Association with Coronal Magnetic Structure. R. H. Levine and E. C. Roelof. EOS 58, 1977, 1204.

- 4.481 Coronal Holes During the New Sunspot Cycle. N. R. Sheeley, Jr. EOS 58, 1977, 768.

Proceedings SPIE/SPSE's Technical Symposium on X-Ray Imaging. San Diego, California, August 24, 1976:

- 4.482 High Resolution X-Ray Optics for Astronomical and Laboratory Sources. S. K. Silk. Proc. SPIE 106, 1977.
- 4.483 Analysis of Photographic X-Ray Images. A. S. Krieger. Proc. SPIE 106, 1977.
- 4.484 Multi-Anode Microchannel Arrays. J. G. Timothy and R. L. Bybee. Proc. SPIE 106, 1977, 24.
- 4.485 Detecting Ultraviolet Radiation from and through the Atmosphere. (Invited) D. K. Prinz. Soc. of Photo-Optical Instrumentation Eng. San Diego, California, August 24, 1976.
- 4.486 Temporal Evolution of Two Coronal Active Regions 1975. G. Noci, G. Poletto, G. Vaiana and M. Zombeck. European Conf. on Astronomy, Roy. Astro. Soc., Leicester, England, August 1977.
- 4.487 How Does an Arch Flare? D. S. Spicer. Space Research Laboratory of the Astronomical Institute. Utrecht, Holland, August 1977.

Commun. LXII Congresso SIF Boll, Sif 112, Sept. 26-Oct. 1, 1977:

- 4.488 Struttura Sappziale Di Regioni Attive Solari in Raggi X Molli E A Microonde. R. Pallavicini, G. Tofani and G. S. Vaiana. SIF 112, 145-146, 1977.
- 4.489 Regione Di Transizione E Corona Sopra Le Macchie E Sopra Le Plage in Regioni Solari Attive. R. Pallavicini. SIF 112, 1977, 146.
- 4.490 UV and Soft X-Ray Imaging of the Alcator Plasma. R. Petrasso, F. H. Seguin, J. M. Davis, A. S. Krieger, J. K. Silk, R. Granetz and R. R. Parker. 19th Annual Meeting of the American Physical Society. Nov. 7-11, 1977.
- 4.491 Multi-Anode Microchannel Arrays. J. G. Timothy. IEEE Int. Electron Devices Meeting. Washington, DC Dec. 5-7, 1977.



AGU Meeting, San Francisco, California, December 1977:

- 4.492 Coronal Disturbances. R. M. MacQueen. (Invited)
- 4.493 Validity of Ionization Equilibrium in the Solar Wind. J. A. Joselyn, R. H. Munro and T. E. Holzer. EOS Transactions AGU 58, 1978, 1222.
- 4.494 Recherche Sulle Regioni Attive Solari Medionate Osservazioni Coordinate in Raggi X Molli E. A. 2.8 Cm. R. Pallavicini and G. Tofani. Mem. Soc. Astron. Ital. Proc. XXI Congresso S.A.I.T. Bologna, Italy, 1977.
- 4.495 Observations of Solar Flares from Skylab. K. G. Widing (Invited Review). Gordon Research Conf. on Magnetic Reconnection in Space and Laboratory Plasma. Brewster Academy, Woltboro, New Hampshire, 1977.
- 4.496 Mass and Energy Flow in the Solar Atmosphere - Implications of Skylab Observations. G. L. Withbroe (Invited Review). Proceedings I.A.U. Colloquium 36 - "The Energy Balance and Hydrodynamics of the Solar Chromosphere and Corona. G. de Bussac, Clermont-Gerrand, 1977, 263-315.

151st A.A.S. Meeting, Austin Texas, January 8-11, 1978:

- 4.497 Molecular Hydrogen in the Solar Atmosphere. G. E. Brueckner, J. D. F. Bartoe, G. D. Sandling and M. E. VanHoosier. B.A.A.S. 9, 568.
- 4.498 The Validity of Ionization Equilibrium in Steady-State Flows. J. A. Joselyn, R. H. Munro and T. E. Holzer. B.A.A.S. 9, 650.

## 5. OTHER PRESENTATIONS

- 5.127 Observations of Solar Flare Arches. K. G. Widing. Colloquium. Bartol Research Foundation, Swarthmore, Pennsylvania, December 3, 1976.
- 5.128 Theoretical and Experimental X-Ray Plasma Diagnostics. R. Rosner. Invited. Colloquium, Bell Laboratories, Holmdel, New Jersey, January 5, 1977.
- 5.129 Open Magnetic Structures and Solar Energetic Particles during Skylab. R. H. Levine and E. C. Roelof. Topical Conf. on Solar and Interplanetary Physics, Tucson, Arizona, January 1977.
- 5.130 The Terrestrial Effects of the Sun's Coronal Holes. K. G. Widing. Univ. of Arizona Astronomy Lectures. February 1977.
- 5.131 EUV Observations of Magnetic Loops. P. V. Foukal (Invited). Skylab Workshop on Solar Flares. Boulder, Colorado, March 1977.
- 5.132 High-Temperature Plasma in Solar Flares in XUV Observed from Skylab. C. C. Cheng. Seminar-University of Maryland, March 1977.
- 5.133 Special Considerations in the Design of Manned Space Experiments. A. S. Krieger. Investigator Working Group Meeting for Spacelab Mission 1. NASA/MSFC, Huntsville, Alabama, April 14, 1977.
- 5.134 Results on Solar Flares from Skylab. K. G. Widing. Solar Physics Seminar. University of Maryland. April 1977.
- 5.135 Skylab Observations of the Changing Sun. P. V. Foukal. Harlow Shapley Lecture. University of Maine, April 1977.
- 5.136 XUV Observations of Flares from Skylab. C. C. Cheng (Invited) MSFC, Huntsville, Alabama, May 1977.
- 5.137 Solar Physics Observations and Magnetic Reconnection. A. S. Krieger. Gordon Conference. Wolfeboro, New Hampshire, June 20-24, 1977.
- 5.138 Magnetic Loops and Downflows in the Solar Corona. P. V. Foukal. Colloquium, High Altitude Observatory, Boulder, Colorado, June 1977.

- 5.139 Supergranulation and the Dynamics of Gas and Field below the Photosphere. P. V. Foukal. Min-Symposium on Solar Rotation and Global Oscillations. Sacramento Peak Observatory, Sunspot, New Mexico, August 1977.
- 5.140 The Effect of Sunspots and Faculae on the Solar Constant. P.V. Foukal (Invited). NOAA Workshop on Monitoring the Solar Constant and Solar UV, Estes Park, Colorado, August 1977.
- 5.141 Thermal Phase of the 7 September 1973 Flare. G. L. Withbroe. Skylab Workshop on Solar Flares, August 1977.
- 5.142 Temperature Minimum Structure in Solar Flares as Derived from CaII and EUV Observations. M. E. Machado. Skylab Workshop on Solar Flares, Boulder, Colorado, August 1977.
- 5.143 Theory of Heating of the Temperature Minimum Region in Flares. A. G. Emslie. Skylab Workshop on Solar Flares. Boulder, Colorado, August 1977.
- 5.144 Magnetic Fields, Convection and Solar Luminosity Variation. P. V. Foukal. Colloquium, Harvard College Observatory, September 1977.
- 5.145 Using Solar Observations to Predict Geomagnetic Activity. N. R. Sheeley, Jr. The Physics Club of Richmond. October 20, 1977.
- 5.146 Space Observations of the Varying Sun. P. V. Foukal. Harlow Shapley Lectures. University of Lowell, Lowell Massachusetts, October 1977.
- 5.147 The Solar Interior. P. V. Foukal. Harlow Shapley Lectures. University of Lowell, Lowell Massachusetts, October 1977.
- 5.148 A Digital Image Processing System. J. R. Wakins, NASA/UAH Data Management System. MSFC, Alabama, October 1977.
- 5.149 What We Know and Don't Know About Coronal Holes. N. R. Sheeley, Jr. Goddard Space Flight Center, Laboratory for Extraterrestrial Physics, Branch Colloquium, November 3, 1977.
- 5.150 Results from the White Light Coronagraph on Skylab. A. I. Poland. Max-Planck Institute for Physics and Astrophysics. Munich, West Germany, November 1977.

- 5.151    Magnetic Loops, Downflows and Convection in the Solar Corona.  
P. V. Foukal, University of California at Irvine. November 1977.
- 5.152    Dynamics of Gas and Magnetic Fields in the Solar Convection Zone. P. V. Foukal, California Institute of Technology, November 1977.
- 5.153    Magnetic Loops, Downflows and Convection in the Solar Corona. P. V. Foukal, California Institute of Technology, November 1977.
- 5.154    Ultraviolet Astronomy. P. V. Foukal. Public Lecture. Boston Museum of Science. November 1977.

Proceedings of the OSO-8 Workshop, University of Colorado, Boulder, Colorado, November 7-10, 1977:

- 5.155    Models for the Solar Transition Layer. G. L. Withbroe - Invited Review.
- 5.156    A Composite Coronal Hole Model. R. H. Munro and J. T. Mariska. OSO-8 Proc., 1977, 76.
- 5.157    X-Ray Observations of Solar Structural Features. A. S. Krieger.
- 5.158    Mean Chromospheric Models. E. H. Avrett and J. E. Vernazza.
- 5.159    High Spatial EUV Observations of Doppler Shifts and Line Broadenings in the Transition Zone and Corona. G. E. Brueckner.
- 5.160    Observations of the H<sub>2</sub> in the Solar Spectrum. G. E. Brueckner and C. Jordan.
- 5.161    The Validity of Ionization Equilibrium for Steady-State Flows in the Transition Region and Corona. J. A. Joselyn, R. H. Munro and T. E. Holzer.
- 5.162    Heating of the Chromosphere and Temperature-Minimum Region in Solar Flares. M. E. Machado.
- 5.163    EUV and X-Ray Observations of the 7 September 1973 Flare. G. L. Withbroe. Skylab Workshop on Solar Flares, December 1977.

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OF POOR QUALITY

- 5.164 Coronal Heating Via the Dissipation of Coronal Currents 1978. R. Rosner (Invited). Colloquium, High Altitude Observatory, Boulder, Colorado, February 2, 1978.
- 5.165 Cooling of Solar Flares - I: The Event of August 9th 1973. J. H. Underwood. Solar Neighborhood Meeting, University of California - Riverside, February 27, 1978.
- 5.166 Loop Structures in Solar Active Regions. J. F. Vesecky. Radioscience Seminar, Stanford University, February 27, 1978.
- 5.167 Solar Magnetic Field Geometry and Solar Wind Flow. R. H. Levine. Solar Terrestrial Coupling Conf., Yosemite, California, February 1978.
- 5.168 Studying the Sun from Skylab. G. L. Withbroe. Colloquium, Yale University, February 1978.
- 5.169 Solar Mass-Ejections: Highlights from the Skylab Flare Workshop. E. J. Schmahl. Colloquium, University of Maryland, March 8, 1978.
- 5.170 The Radiative Energy Output in the EUV ( $1200-1960 \text{ \AA}$ ) in the 5 September 1973 Flare. C. C. Cheng. Skylab Workshop on Solar Flares.
- 5.171 Preflare Morphology in the XUV Observed from Skylab. C. C. Cheng. Skylab Workshop on Solar Flares.
- 5.172 The Decay Phase of the 7 September 1973 Solar Flare. D. L. McKenzie and G. L. Withbroe. Skylab Workshop Monograph on Solar Flares.
- 5.173 Chromosphere and Temperature-Minimum Heating in Solar Flares. R. C. Canfield, J. C. Brown, G. E. Brueckner, I. Craig, J. Cook, G. Doschek, B. W. Lites, M. E. Machado, R. W. Noyes and J. Underwood. Proceedings of the Skylab Solar Flare Workshop.
- 5.174 Non-Predictive Pre-Flare EUV Fluctuations. E. M. Reeves and E. J. Schmahl. Skylab Workshop Monograph on Solar Flares.
- 5.175 The EUV Radiative Budget of the 5 September 1973 Flare. E. J. Schmahl. Skylab Workshop on Solar Flares.
- 5.176 EUV Surges and Their Relationship to Flares. E. J. Schmahl. Skylab Workshop on Solar Flares.

- 5.177 The Pre-Onset Morphology of the 5 September Flare in X-Rays, EUV and H-alpha. E. J. Schmahl, C. V. Solodyna, J. B. Smith, Jr., and C. C. Cheng. Skylab Workshop on Solar Flares.

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## ERRATA

### NASA TECHNICAL MEMORANDUM X-73393 APOLLO TELESCOPE MOUNT— A PARTIAL LISTING OF SCIENTIFIC PUBLICATIONS AND PRESENTATIONS, SUPPLEMENT 1

Edited by John M. Reynolds and William C. Snoddy

May 1977

- 1. 143     Add Appl. Optics 16, 873, 1977.
- 2. 124     Change authors to:  
           R. M. Broussard, N. R. Sheeley, Jr., R. Tousey, and J. H.  
           Underwood. Solar Physics (in press).
- 3. 64      Delete.
- 4. 378     Add B.A.A.S. 8, 557, 1976.
- 5. 99      Change "C. Moore-Sitterling" to "C. Moore-Sitterly".

## APPROVAL

### APOLLO TELESCOPE MOUNT—A PARTIAL LISTING OF SCIENTIFIC PUBLICATIONS AND PRESENTATIONS, SUPPLEMENT 2

Edited by John M. Reynolds and William C. Snoddy

The information in this report has been reviewed for technical content. Review of any information concerning Department of Defense or nuclear energy activities or programs has been made by the MSFC Security Classification Officer. This report, in its entirety, has been determined to be unclassified.



CHARLES A. LUNDQUIST

Director, Space Sciences Laboratory